

## Claims

- [c1] What is claimed is: 1. A method for a novel model for dynamic server-side generation of computer program code which can be executed at the client machine, the method comprising the steps of:
- Having an application consisting of three main sections, which subdivide the application into layers of functionality, the Modules section, the Options section and the Content section;
- Having an Application Logic Engine; and
- Having a plurality of server and client computing means.
- [c2] 2. The method of claim 1 in which said Modules section includes all mutually-exclusive components of said application.
- [c3] 3. The method of claim 1 in which said Options section includes all options which implement the functionality of every Module.
- [c4] 4. The method of claim 1 in which said Options section can contain a plurality of sub-options.
- [c5] 5. The method of claim 1 in which said Content section comprises all the actual functionality of said Application.
- [c6] 6. The method of claim 1 in which said Application Logic Engine has the following interconnected components:
- i)An Application Building Engine that functions as a core arbiter that controls and directs the construction of applications and serves as link between all Application Logic Engine modules and other parts of the system;
  - ii)An Application Descriptor Repository that serves as a data repository that contains details about the application structure, including its modules, options, suboptions and content;
  - iii)An Application Descriptor Interface that interfaces and acts as an abstraction layer between the Application Building Engine and the Application Descriptor Repository;
  - iv)An Application Implementation Reference Repository is a data repository that contains client-specific implementation details of an application;

v)An Application Implementation Reference Interface that interfaces the Application Implementation Reference Repository and Application Building Engine; and

vi)An Application Logic Engine Interconnection Pipe which interconnects a plurality of Application Logic Engines.

- [c7] 7. The method of claim 1 in which includes the following step:  
Having server means create customized applications in response to client means request.
- [c8] 8. The method of claim 1 in which the Application Logic Engine is integrated into an other software component architecture model.
- [c9] 9. The method of claim 1 in which includes the following steps:  
Posting of a request from a client means to a server means;  
Examining the request by the server means;  
Passing the request to the Application Logic Engine on the Server means;  
Having said request contain an application identifier and functionality information; Having said application identifier referring to the type of service in the request;  
Having said Server implement required functionality in a Client-specific language and fulfill the request;  
Retrieving all application structure details including modules, options and suboptions from a data repository;  
Retrieving the required platform and environment information that implements the required functionality;  
Interfacing the application structures and required functionality; and  
Delivering the finished application or an error message if application does not implement all logical descriptors required by the client means application request.
- [c10] 10. A computer program product for a novel model for dynamic server-side generation of computer program code which can be executed at the client machine, the computer program product comprising a computer usable medium having computer readable program code thereon, including:

Computer code for having an application consisting of three main sections, which subdivide the application into layers of functionality, the Modules section, the Options section and the Content section;  
Computer code for having an Application Logic Engine; and  
Having a plurality of server and client computing means.

- [c11] 11. The computer program product of claim 10 in which said Modules section includes all mutually-exclusive components of said application.
- [c12] 12. The computer program product of claim 10 in which said Options section includes all options which implement the functionality of every Module.
- [c13] 13. The computer program product of claim 10 in which said Options section can contain a plurality of sub-options.
- [c14] 14. The computer program product of claim 10 in which said Content section comprises all the actual functionality of said Application.
- [c15] 15. The computer program product of claim 10 in which said Application Logic Engine has the following interconnected components:
- i)An Application Building Engine that functions as a core arbiter that controls and directs the construction of applications and serves as link between all Application Logic Engine modules and other parts of the system;
  - ii)An Application Descriptor Repository that serves as a data repository that contains details about the application structure, including its modules, options, suboptions and content;
  - iii)An Application Descriptor Interface that interfaces and acts as an abstraction layer between the Application Building Engine and the Application Descriptor Repository;
  - iv)An Application Implementation Reference Repository is a data repository that contains client-specific implementation details of an application;
  - v)An Application Implementation Reference Interface that interfaces the Application Implementation Reference Repository and Application Building Engine; and
  - vi)An Application Logic Engine Interconnection Pipe which interconnects a

plurality of Application Logic Engines.

[c16] 16. The computer program product of claim 10 in which includes the following step:

Having server means create customized applications in response to client means request.

[c17] 17. The computer program product of claim 10 in which the Application Logic Engine is integrated into an other software component architecture model.

[c18] 18. A computer program to add a new terminal device to a system using the computer program in claim 10 with interfaces and the program code for used for:

Posting of a request from a client means to a server means;

Examining the request by the server means;

Passing the request to the Application Logic Engine on the Server means;

Having said request contain an application identifier and functionality information; Having said application identifier referring to the type of service in the request;

Having said Server implement required functionality in a Client-specific language and fulfill the request;

Retrieving all application structure details including modules, options and suboptions from a data repository;

Retrieving the required platform and environment information that implements the required functionality;

Interfacing the application structures and required functionality; and

Delivering the finished application or an error message if application does not implement all logical descriptors required by the client means application request.

202503230950